

IN THE CLAIMS

Rewrite claims 1, 4, 5, 8-11 and 14 as set forth below.

1. (Amended) A module for optical communication having a modulator integrated laser includes a semiconductor laser active region and an optical modulation region for modulating the light from the semiconductor laser active region; and a temperature control region for controlling temperature of at least the optical modulation region, said semiconductor laser active region having a multiple-quantum well structure having at least two quaternary mixed crystal layers in which a band offset of a conduction band is larger than a band offset of a valence electron band, said at least two quaternary mixed crystal layers being selected from the group consisting of quaternary mixed compounds of In, Ga, Al and As and of quaternary mixed compounds of In, Ga, N and As, wherein a temperature of a semiconductor laser active region or a temperature of a component in thermal contact with the semiconductor laser active region for holding the temperature of the semiconductor laser active region is set to 35°C or higher during operation of the semiconductor laser active region and the optical modulation region.

2. (Not Amended) A module for optical communication as defined in claim 1, wherein the temperature control component is a heating component or a heater.

3. (Not Amended) A module for optical communication as defined in claim 1, wherein the temperature control component is disposed without having a cooling component.

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4. (Amended) A module for optical communication as defined in claim 1, wherein the temperature of at least the semiconductor laser active region or the temperature control component is thermal in with the semiconductor laser active region for holding the semiconductor laser active region is set to 30°C or higher during operation of the semiconductor laser active region and the optical modulator region.

5. (Amended) A module for optical communication having a modulator integrated laser includes a semiconductor laser active region having at least two active regions and an optical modulation region for modulating the light from the semiconductor laser active regions; and a temperature control component for temperature control of at least the optical modulation region, and a control component for controlling the wavelength of the light emitted from the semiconductor laser active region, said semiconductor laser active region having a multiple-quantum well structure having at least two quaternary mixed compounds layers in which a band offset of a conduction band is larger than a band

offset of a valence electron band, said at least two quaternary mixed crystal layers being selected from the group consisting of quaternary mixed compounds of In, Ga, Al and As and a quaternary mixed crystals of In, Ga, N and As, wherein a temperature of at least the semiconductor laser active region or a temperature of the component in thermal contact with the semiconductor laser active region for holding the temperature of the semiconductor laser active region is set to 35°C or higher during operation of the semiconductor laser active region and the optical modulation region.

6. (Not Amended) A module for optical communication as defined in claim 5, wherein the temperature control component is a heating component or a heater.

7. (Not Amended) A module for optical communication as defined in claim 5, wherein the temperature control component is disposed without having a cooling component.

8. (Amended) A module for optical communication as defined in claim 5, wherein the temperature of at least the semiconductor laser active region or the component in thermal contact with the semiconductor laser active region for holding the temperature of the semiconductor laser active region is set to 30°C or higher during operation of the semiconductor laser active region and the optical modulation region.

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9. (Amended) A module for optical communication as defined in claim 5, wherein the semiconductor laser active region and the optical modulation region are constituted, respectively, with semiconductor chip regions separated from each other.

10. (Amended) A module for optical communication as defined in claim 5, wherein the semiconductor laser active region and the optical modulation region are constituted as semiconductor chip regions integrated on one same substrate.

11. (Amended) An optical transmission module having a modulator integrated laser includes a semiconductor laser active region and a plurality of optical modulation regions for modulating the light from the semiconductor laser active region, a multiplexer for multiplexing the outputted light and a temperature control component for temperature control of at least the optical modulation region, said semiconductor laser active region has a multiple-quantum well structure having at least two quaternary mixed crystal layers in which a band offset of a conduction band is larger than a band offset of a valence electron band, said at least two quaternary mixed crystal layers being selected from the group consisting of quaternary mixed compounds of In, Ga, Al and As and a quaternary mixed compounds of In, Ga, N and As, and the temperature of at least the semiconductor laser active region or the temperature of the component in thermal contact with the semiconductor laser active region for holding the temperature of

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the semiconductor laser active region is set to 35°C or higher during operation of the semiconductor laser active region and the optical modulation region.

12. (Not Amended) A module for optical communication as defined in claim 11, wherein the temperature control component is a cooling component or a heater.

13. (Not Amended) A module for optical communication as defined in claim 11, wherein the temperature control component is disposed without having a cooling component.

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14. (Amended) A module for optical communication as defined in claim 11, wherein the temperature of at least the semiconductor laser active region or the component in thermal contact with the semiconductor laser active region for holding the temperature of the semiconductor laser active region is set to 30°C or higher during operation of the semiconductor laser active region and the optical modulator region.

REMARKS

Applicants extend their appreciation to the Examiner for granting an Office Interview, which the Examiner's Supervisor, Mr. Paul Ip, also attended on January 16, 2003. In the Interview, it was suggested that the claims be amended to clearly define the invention by reference to Figs. 1, 2 (Fig 2 is a comparison figure), 3, 4 and 8 of the present